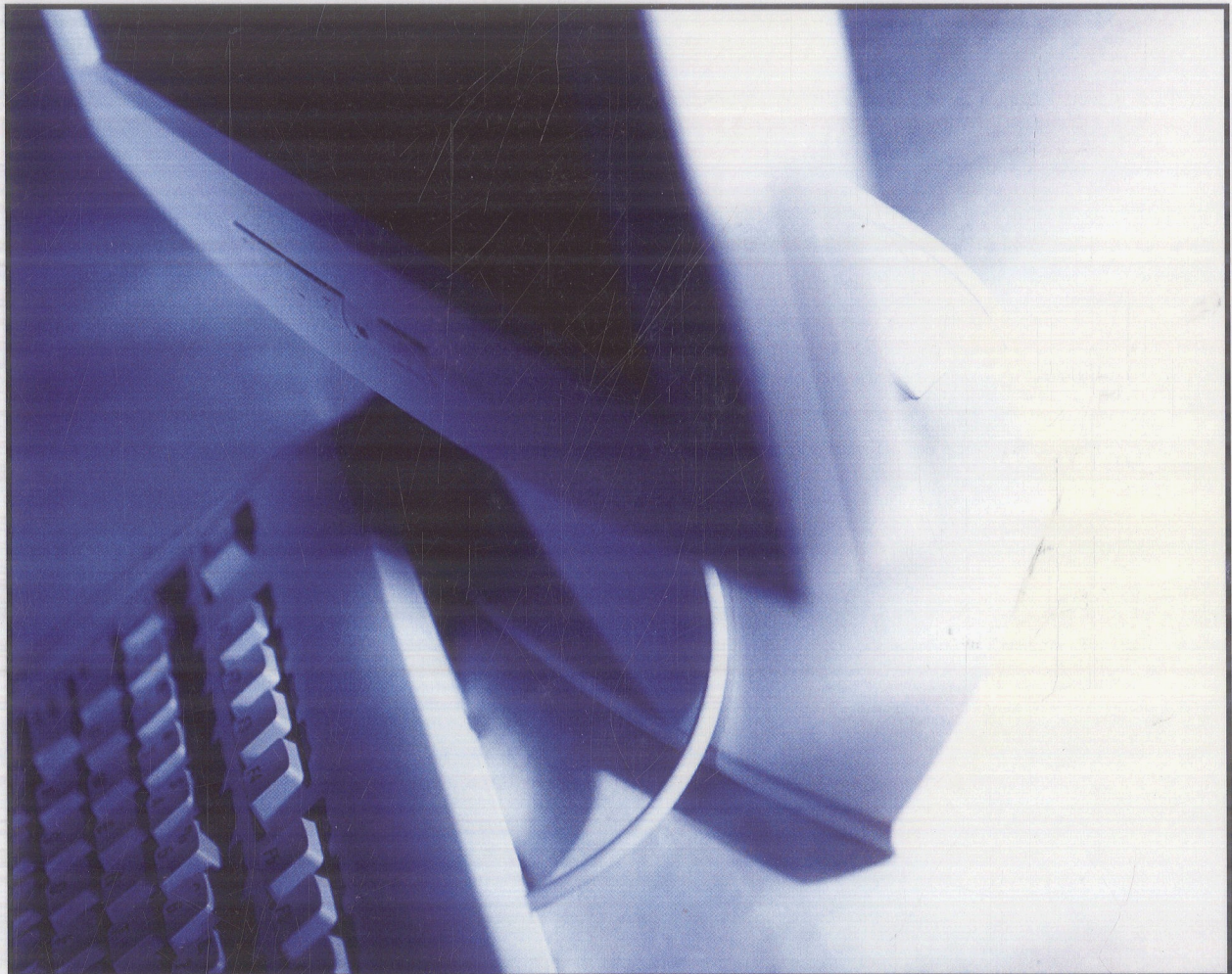


PREMIER REFERENCE SOURCE

# Affective, Interactive and Cognitive Methods for E-Learning Design

CREATING AN OPTIMAL EDUCATION EXPERIENCE



Aimilia Tzanavari & Nicolas Tsapatsoulis

# Table of Contents

<b>Foreword</b> .....	xvi
-----------------------	-----

<b>Preface</b> .....	xviii
----------------------	-------

## **Section 1 Background**

### **Chapter 1**

From e-Learning to e-Education: Goals, Strategic Assessment and Implications .....	1
<i>Zohar Ben-Asher, European Centre for Research &amp; Financing, Israel &amp; ABC Consultants, UK</i>	

## **Section 2 Social Interaction and Collaborative Learning**

### **Chapter 2**

Web Advances in Education: Interactive, Collaborative Learning via Web 2.0 .....	32
<i>Eleni Kaldoudi, Democritus University of Thrace, Greece</i>	
<i>Stathis Konstantinidis, Aristotle University of Thessaloniki, Greece</i>	
<i>Panagiotis Bamidis, Aristotle University of Thessaloniki, Greece</i>	

### **Chapter 3**

Individual and Collaborative Approaches in E-Learning Design .....	51
<i>Abel Usoro, University of the West of Scotland, UK</i>	
<i>Grzegorz Majewski, University of the West of Scotland, UK</i>	
<i>Len Bloom, University of Botswana, Botswana</i>	

### **Chapter 4**

Interface Design for Social Interaction in E-Learning Environments .....	72
<i>Luciane Maria Fadel, UNOESC Videira, Brazil</i>	
<i>Mary C. Dyson, The University of Reading, UK</i>	

**Section 3**  
**Technology-Enhanced Learning Design**

**Chapter 5**

- E-Learning Design from a “Quality of Experience” Perspective: Heuristics and Case-Studies ..... 94  
*Franca Garzotto, Politecnico di Milano, Italy*

**Chapter 6**

- A Pedagogics Pattern Model of Blended E-Learning: A Step Towards Designing  
Sustainable Simulation-Based Learning ..... 114  
*Michel Labour, Univ Lille Nord de France, France & UVHC, LSC, France*  
*Christophe Kolski, Univ Lille Nord de France, France & UVHC, LAMIH-UMR CNRS, France*

**Chapter 7**

- Designing E-Learning Applications with Students: The Case of the We!Design Methodology ..... 138  
*George N. Triantafyllakos, Aristotle University of Thessaloniki, Greece*  
*George E. Palaigeorgiou, University of Thessaly, Greece*  
*Ioannis A. Tsoukalas, Aristotle University of Thessaloniki, Greece*

**Chapter 8**

- Orchestrating Ontologies for Courseware Design ..... 155  
*Tatiana Gavrilova, Saint-Petersburg State University, Russia*

**Chapter 9**

- PAUL: An Adaptive Electronic Learning Environment to Develop Teacher Expertise  
and ICT-Related Technological Pedagogical Content Knowledge (ICT-TPCK)..... 173  
*Angeli Charoula, University of Cyprus, Cyprus*  
*Veletsianos George, University of Manchester, UK*

**Chapter 10**

- Using E-Learning to Achieve Fluency in Foreign Languages ..... 187  
*Michael Zock, LIF, CNRS, France*  
*Stergos Afantenos, LINA, Université de Nantes, France*

**Section 4**  
**Multimedia and Virtual Reality in E-Learning**

**Chapter 11**

- Key Factors and New Directions of Multimedia Learning Design ..... 207  
*Haido Samaras, University of Macedonia, Greece*  
*Thanasis Giouvanakis, University of Macedonia, Greece*  
*Despina Bousiou, University of Macedonia, Greece*  
*Konstantinos Tarabanis, University of Macedonia, Greece*

<b>Chapter 12</b>	
Virtual Reality in Education.....	228
<i>Chris Christou, University of Nicosia, Cyprus</i>	

<b>Chapter 13</b>	
From Usability to User Experience: Evaluating the Educational and Motivational Value of an Augmented Reality Learning Scenario .....	244
<i>Costin Pribeanu, National Institute for Research and Development in Informatics, Romania</i>	
<i>Dragoş Daniel Iordache, National Institute for Research and Development in Informatics, Romania</i>	

**Section 5**  
**Affective Computing in E-Learning Environments**

<b>Chapter 14</b>	
The Potential of Affective Computing in E-Learning: The Journey from Theory to Practice in the “Myself” Project .....	260
<i>Fabrizia Mantovani, University of Milan-Bicocca, Italy</i>	
<i>Linda Confalonieri, University of Milan-Bicocca, Italy</i>	
<i>Marcello Mortillaro, Swiss Center for Affective Sciences, Switzerland</i>	
<i>Olivia Realdon, University of Milan-Bicocca, Italy</i>	
<i>Valentino Zurloni, University of Milan-Bicocca, Italy</i>	
<i>Luigi Anolli, University of Milan-Bicocca, Italy</i>	

<b>Chapter 15</b>	
Affective E-Learning System: Analysis of Learners’ State .....	275
<i>G. Caridakis, Image, Video and Multimedia Systems Laboratory, Greece</i>	
<i>P. Tzouveli, Image, Video and Multimedia Systems Laboratory, Greece</i>	
<i>L. Malatesta, Image, Video and Multimedia Systems Laboratory, Greece</i>	
<i>A. Raouzaïou, Image, Video and Multimedia Systems Laboratory, Greece</i>	
<i>K. Karpouzis, Image, Video and Multimedia Systems Laboratory, Greece</i>	
<i>S. Kollias, Image, Video and Multimedia Systems Laboratory, Greece</i>	

<b>Compilation of References .....</b>	<b>295</b>
--	------------

<b>About the Contributors .....</b>	<b>335</b>
-------------------------------------	------------

<b>Index.....</b>	<b>346</b>
-------------------	------------